

Patent  
Serial No. 10/556,245  
Reply Brief

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of  
ROBERT F. M. HENDRIKS ET AL.  
Serial No.: 10/556,245  
Filed: NOVEMBER 10, 2005

Atty. Docket: NL030516US1  
CONF. NO.: 6705  
Examiner: THANH T. NGUYEN  
Group Art Unit: 2893

TITLE: METHOD OF PRODUCING A PLURALITY OF BODIES

**Mail Stop Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450**

**REPLY BRIEF**

Sir:

Appellants herewith respectfully present its Reply Brief as follows:

### ARGUMENT/REMARKS

As a first point, Appellants do not dispute that Ravkin shows using a stamp in FIG. 55 to imprint an object, which object that is imprinted in Ravkin is termed in Ravkin a particle. What is disputed is that Ravkin (emphasis added) "[produces] a stamp by attaching particles to a surface" as substantially recited in claim 1 of the present application before the Board.

The Examiner's Answer repeatedly cites sections of Ravkin, such as paragraph [0574] of Ravkin that refers to particles, such as on page 11 of the Examiner's Answer, however, Appellants respectfully point out that each citation of "particles" in Ravkin refers to the object that is imprinted and not the objects that do the imprinting. Other sections of Ravkin are cited in the Examiner's Answer, such as on page 13 of the Examiner's Answer, for showing attached, however as is clear from a simple reading of the cited sections of Ravkin, such as paragraph [0458] (die 1310 is attached to die holder 1336), paragraph [0574] (A particle code may be formed from chromic materials incorporated in and/or attached to a particle), these sections have nothing to do with the method that is described in Ravkin for forming the stamp that is taught by Ravkin as utilized for imprinting a particle.

On page 7 of the Examiner's Answer, a position is taken that Ravkin's method of forming features 1314 (see, Ravkin, FIGs. 52-54 showing pyramids and cone-like structures, cited in the Examiner's Answer) corresponds to Appellants act of attaching particles. This position is respectfully traversed.

In Ravkin, paragraph [0431], cited in the Examiner's Answer on page 11, Ravkin describes how the features 1314 are formed stating (emphasis added):

Surface relief on a die or mold may be formed by selective removal, deposition, or other restructuring of die- or mold-forming materials. Thus, features may be formed by soft lithography, photolithography followed by chemical etching, laser etching, crystal growth, and/or so on.

As clear to anyone of ordinary skill in the art, lithographic processes of depositing layers is not a process of "attaching particles" as recited in the claims of the present method.

As readily appreciated by a person of ordinary skill in the art, "Optical lithography, is a process used in microfabrication to selectively remove parts of a thin film or the bulk of a substrate. It uses light to transfer a geometric pattern from a photo mask to a light-sensitive chemical photo resist, or simply 'resist,' on the substrate. A series of chemical treatments then engraves the exposure pattern into the material underneath the photo resist."

(Wikipedia contributors. "Photolithography." Wikipedia, The Free Encyclopedia. Wikipedia, The Free Encyclopedia, 30 Jan. 2010. Web. 19 Feb. 2010.)

So while Ravkin shows forming features 1314 through a process of deposition of layers and subsequent exposure and etching of the deposited layers, lithography is not a process of attaching particles as readily appreciated by a person of ordinary skill in the art.

In Collins English Dictionary, the same reference cited in the Examiner's Answer on page 10 for the definition of "attaching", a "particle" is defined as "an extremely small piece or amount".

Accordingly, it is respectfully submitted that attaching small pieces of an object is not equivalent to a process of photolithography, nor would such be understood to be equivalent processes by a person of ordinary skill in the art. It also would not be understood to be

equivalent processes based on the teachings of the present application. Further, clearly Ravkin appreciated what a particle is and describes the object imprinted in Ravkin as "[p]article 70 may have any suitable size and shape. The size and shape may be selected, for example, with respect to the type of analysis performed, the complexity of the analysis, containers used to hold the particles, methods used to move the particles, methods used for reading codes and measuring experimental results, and/or so on. In preferred embodiments, particle 70 is small enough so that two or more particles can be analyzed at once in a microscopic field of view. The shape of particle 70 may be generally flat or planar, for example, the flattened or generally planar parallelepiped shown in FIG. 1. In other embodiments, particle 70 may be cylindrical, spherical, ovalloid, and/or the like." (See, Ravkin, paragraph [0081].)

It is respectfully submitted that "claim language must be analyzed, not in a vacuum, but in light of: (A) The content of the particular application disclosure; (B) The teachings of the prior art; and (C) The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made." (See, Solomon v. Kimberly-Clark Corp., 216 F.3d 1372, 1379, 55 USPQ2d 1279, 1283 (Fed. Cir. 2000).)

The Appellants in describing particles state (emphasis added):

According to another aspect of the method of the invention, particles of diamond are used as the particles. (See, present application, page 6, lines 19-20.)

[T]he particles used to produce the stamp and, occasionally, the additional stamp are preferably solid particles of a hard material such as, for example, diamond or tungsten carbide, so that repetitive usage of the stamp for the large number of

times does not wear out the shape of the stamp. (See, present application, page 6, lines 22-25.)

According to another aspect of the method of the invention, particles having a size ranging between 100 nm and 1  $\mu\text{m}$  are used as the particles. (See, present application, page 6, lines 26-27 and similarly, page 8, lines 6-11.)

It is admitted that the claims presently before the Board do not include an element of the act of how the particles are attached to the auxiliary body as stated in the Examiner's Answer at the bottom of page 12, although illustrative examples of attaching particles are provided in the present application, such as on page 8, lines 3-5. However, it is respectfully submitted that no such limitation need be recited to distinguish over Ravkin since Ravkin does not teach, disclose or suggest an act of "attaching particles to a surface of an auxiliary body" as is recited in the currently pending claims, such as claim 1 of the present application that is before the Board.

To summarize, it is respectfully submitted that Ravkin's lithographic method of forming features 1314 on the die 1310, namely, "features ... formed by soft lithography, photolithography followed by chemical etching, laser etching, crystal growth, and/or so on" (see, Ravkin, FIGs. 52-55 and paragraph [0431]), does not teach, disclose or suggest a method that amongst other patentable elements, comprises (illustrative emphasis added) "producing a stamp by attaching particles to a surface of an auxiliary body in a pattern; and using the attached particles on the stamp to imprint an imprintable material, thereby producing the plurality of bodies, the each body having at least a surface portion bearing an a direct imprint of the particle pattern in the stamp" as recited in claim 1. Each of Ono, Abe

and Neuhaus are introduced for allegedly showing elements of the dependent claims and as such, do nothing to cure the deficiencies in Ravkin.

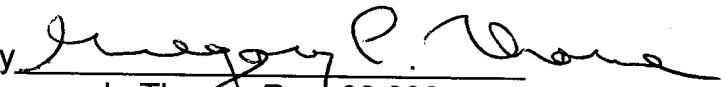
Based on the foregoing, the Appellants respectfully submit that independent claim 1 is patentable over Ravkin and notice to this effect is earnestly solicited. Claims 2-12 respectively depend from claim 1 and accordingly are allowable for at least this reason and allowance thereof is respectfully requested.

CONCLUSION

Claims 1-12 are patentable over any of Ravkin alone and in view of any combination of Ono, Abe, Neuhaus.

Thus the Examiner's rejection of claims 1-12 should be reversed.

Respectfully submitted,

By   
Gregory L. Thorne, Reg. 39,398  
Attorney for Appellants  
February 17, 2010

**THORNE & HALAJIAN, LLP**  
Applied Technology Center  
111 West Main Street  
Bay Shore, NY 11706  
Tel: (631) 665-5139  
Fax: (631) 665-5101

**Please direct all inquiries and correspondence to:**

Michael E. Belk, Reg. 33,357  
Philips Intellectual Property & Standards  
P.O. Box 3001  
Briarcliff Manor, NY 10510-8001  
(914) 333-9643